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10/557,292	11/18/2005	Hiroshi Kayama	OKUDP0147US	7339

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EXAMINER	
PATANKAR, ANEETA V	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/557,292	KAYAMA ET AL.	
	Examiner	Art Unit	
	Aneeta Patankar	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 September 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 November 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/2/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1 and 10** are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,251,194 to *Yoshimoto et al*.

As to **claim 1**, *Yoshimoto* discloses an optical disk apparatus comprising: a light source (20, fig. 1A, columns 5-6, lines 50-4); an objective lens for converging light emitted from the light source toward an optical disk; a first photo detection device for detecting reflected light from the optical disk and outputting a first signal (30, fig. 1A, columns 5-6, lines 50-4); a signal processing section for receiving the first signal and generating a signal containing information recorded on the optical disk (Column 6, lines 13-34); a second photo detection device for detecting a portion of the light emitted from the light source and outputting a second signal (34, fig. 1A, columns 5-6, lines 50-4); a light source driving section for receiving the second signal, and based on the second signal, driving the light source so as to emit the light at an output power of the light source which equals a target value (Fig. 1, column 12, lines 54-65); and an amplitude fluctuation detection section for detecting an amplitude fluctuation amount of the second signal, and if the amplitude fluctuation amount exceeds a predetermined value,

changing driving characteristics of the light source driving section (Fig. 1, column 12, lines 54-64).

As to **claim 10**, *Yoshimoto* discloses an information recording/reproduction method by an optical disk apparatus including: a light source (20, fig. 1A, columns 5-6, lines 50-4); an objective lens for converging light emitted from the light source toward an optical disk (30, fig. 1A, columns 5-6, lines 50-4); a first photo detection device for detecting reflected light from the optical disk and outputting a first signal (32, fig. 1A, columns 5-6, lines 50-4); and a signal processing section for receiving the first signal and generating a signal containing information recorded on the optical disk (Column 6, lines 13-34), the information recording/reproduction method comprising: a step of detecting a portion of the light emitted from the light source and outputting a second signal (Fig. 1A, columns 5-6, lines 50-4); a step of receiving the second signal, and based on the second signal, driving the light source so as to emit the light at an output power of the light source which equals a target value (Fig. a, column 12, lines 54-65); and a step of detecting an amplitude fluctuation amount of the second signal, and if the amplitude fluctuation amount exceeds a predetermined value, changing driving characteristics in the step of driving the light source (Fig. 1, column 12,lines 54-64).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claims 2-4, 11-13, 15, and 18** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,251,194 to *Yoshimoto et al*. in view of U.S. Patent No. 5,986,984 to *Nakamura et al*.

As to **claim 2**, *Yoshimoto* discloses the optical disk apparatus wherein the light source driving section includes a current control section for receiving the second signal and generating a driving current which is controlled so that the output power of the light source equals the target value (Fig. 1, column 12, lines 54-64).

Yoshimoto is deficient to disclosing the optical disk apparatus wherein there is a high-frequency module for modulating the driving current with a predetermined frequency and oscillation power.

However, *Nakamura* discloses the optical disk apparatus wherein there is a high-frequency module for modulating the driving current with a predetermined frequency and oscillation power (Fig. 51 and 52, column 44, lines 24-57).

Yoshimoto and *Nakamura* are analogous art because they are from the same field of endeavor with respect to optical disc drives.

At the time of invention, it would have been obvious to a person or ordinary skilled in the art to have current control section in an optical disk apparatus as well as a high-frequency module for modulating the driving current. The suggestion/motivation would have been in order to control the magnitude of the high frequency current applied to the semiconductor laser as taught by *Yoshimoto* in view of *Nakamura* (Fig. 51, column 44, lines 24-35).

As to **claim 3**, *Yoshimoto* is deficient to disclosing the optical disk apparatus wherein the amplitude fluctuation detection section detects the amplitude fluctuation amount of the second signal, and if the amplitude fluctuation amount exceeds the predetermined value, changes a modulation frequency of the high-frequency module.

However, *Nakamura* discloses the optical disk apparatus wherein the amplitude fluctuation detection section detects the amplitude fluctuation amount of the second signal, and if the amplitude fluctuation amount exceeds the predetermined value, changes a modulation frequency of the high-frequency module (Fig. 57, column 46, lines 56-67). In addition, the same motivation is used as the rejection for claim 2.

As to **claim 4**, *Yoshimoto* is deficient to disclosing the optical disk wherein the amplitude fluctuation detection section detects the amplitude fluctuation amount of the second signal, and if the amplitude fluctuation amount exceeds the predetermined value, changes an oscillation power of the high-frequency module.

However, *Nakamura* discloses the optical disk wherein the amplitude fluctuation detection section detects the amplitude fluctuation amount of the second signal (Fig. 57, column 46, lines 56-67), and if the amplitude fluctuation amount exceeds the predetermined value, changes an oscillation power of the high-frequency module (Fig. 51 and 52, column 44, lines 24-57). In addition, the same motivation is used as the rejection for claim 2.

As to **claim 11**, *Yoshimoto* discloses the information recording/reproduction method wherein the step of driving the light source includes a step of receiving the

second signal and generating a driving current which is controlled so that the output power of the light source equals the target value (Fig. 1, column 12, lines 54-64),

Yoshimoto is deficient in disclosing the information recording/reproduction method wherein there is a step of modulating the driving current with a predetermined frequency and oscillation power.

However, *Nakamura* discloses the information recording/reproduction method wherein there is a step of modulating the driving current with a predetermined frequency and oscillation power (Fig. 51 and 52, column 44, lines 24-57). In addition, the same motivation is used as the rejection for claim 2.

As to **claim 12**, *Yoshimoto* is deficient in disclosing the information recording/reproduction method wherein the step of changing the driving characteristics detects the amplitude fluctuation amount of the second signal, and if the amplitude fluctuation amount exceeds the predetermined value, changes a modulation frequency in the modulation step.

However, *Nakamura* discloses the information recording/reproduction method wherein the step of changing the driving characteristics detects the amplitude fluctuation amount of the second signal, and if the amplitude fluctuation amount exceeds the predetermined value, changes a modulation frequency in the modulation step (Fig. 57, column 46, lines 56-67). In addition, the same motivation is used as the rejection for claim 2.

As to **claim 13**, *Yoshimoto* is deficient in disclosing the information recording/reproduction method wherein the amplitude fluctuation detection section

detects the amplitude fluctuation amount of the second signal, and if the amplitude fluctuation amount exceeds the predetermined value, changes an oscillation power of the high-frequency module.

However, *Nakamura* discloses the information recording/reproduction method wherein the amplitude fluctuation detection section detects the amplitude fluctuation amount of the second signal, and if the amplitude fluctuation amount exceeds the predetermined value, changes an oscillation power of the high-frequency module (Fig. 57, column 46, lines 56-67). In addition, the same motivation is used as for rejection 2.

As to **claim 15**, *Yoshimoto* discloses the information recording/reproduction method wherein the step of changing the driving characteristics detects the amplitude fluctuation amount of the second signal, and if the amplitude fluctuation amount exceeds the predetermined value, changes the target value in the step of generating the driving current (Fig. 1, column 12, lines 54-64).

As to **claim 18**, *Yoshimoto* is deficient in disclosing the information recording/reproduction method wherein the step of changing the driving characteristics changes an oscillation power in accordance with the type of the optical disk.

However, *Nakamura* discloses the information recording/reproduction method wherein the step of changing the driving characteristics changes an oscillation power in accordance with the type of the optical disk (Fig. 51, column 44, lines 24-35). In addition, the same motivation is used as the rejection for claim 2.

5. **Claims 8, 9, and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,251,194 to *Yoshimoto et al.* in view of U.S. Patent No. 6,950,378 B1 to *Miyazaki et al.*

As to **claim 8**, *Yoshimoto* is deficient in disclosing the optical disk apparatus wherein the amplitude fluctuation detection section includes a high-pass filter, and detects the amplitude fluctuation amount of the second signal having passed through the high-pass filter.

However, *Miyazaki* discloses the optical disk apparatus wherein the amplitude fluctuation detection section includes a high-pass filter, and detects the amplitude fluctuation amount of the second signal having passed through the high-pass filter (Fig. 6; column 17, lines 18-32).

Yoshimoto and *Miyazaki* are analogous art because they are from the same field of endeavor with respect to optical disk drives.

At the time of invention, it would have been obvious to a person of ordinary skilled in the art to create an optical disk apparatus that has amplitude fluctuation detection that includes a high-pass filter. The suggestion/motivation would have been in order to extract a specific frequency component as taught by *Yoshimoto* in view of *Miyazaki* (Column 17, lines 18-32).

As to **claim 9**, *Yoshimoto* is deficient in disclosing the optical disk apparatus wherein the amplitude fluctuation detection section changes an oscillation power in accordance with the type of the optical disk.

However, *Miyazaki* discloses the optical disk apparatus wherein the amplitude fluctuation detection section changes an oscillation power in accordance with the type of the optical disk (Fig. 6, column 17, lines 18-32). In addition, the same motivation is used as the rejection for claim 8.

As to **claim 17**, *Yoshimoto* is deficient in disclosing the information recording/reproduction method wherein the step of changing the driving characteristics further includes a step of removing a low-range component from the second signal, and detects the amplitude fluctuation amount of the signal from which the low-range component has been removed.

However, *Miyazaki* discloses the information recording/reproduction method wherein the step of changing the driving characteristics further includes a step of removing a low-range component from the second signal, and detects the amplitude fluctuation amount of the signal from which the low-range component has been removed (Fig. 6, column 17, lines 33-51). In addition, the same motivation is used as the rejection for claim 9.

6. **Claims 5-7, 14 and 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,251,194 to *Yoshimoto et al*. in view of U.S. Patent No. 5,986,984 to *Nakamura et al*. in further view of U.S. Patent No. 6,950,378 B1 to *Miyazaki et al.*

As to **claim 5**, *Yoshimoto* and *Nakamura* are deficient in disclosing the optical disk apparatus wherein the current control section generates the driving current based

on a predetermined frequency component of the second signal, and the predetermined frequency component is approximately 1/10 or less of a frequency of the first signal.

However, *Miyazaki* discloses the optical disk apparatus wherein the current control section generates the driving current based on a predetermined frequency component of the second signal, and the predetermined frequency component is approximately 1/10 or less of a frequency of the first signal (Fig. 11, columns 22-23, lines 46-8).

Yoshimoto, Nakamura, and *Miyazaki* are analogous art because they are from the same field of endeavor with respect to optical disk drives.

At the time of invention, it would have been obvious to a person of ordinary skilled in the art to create an optical disk apparatus wherein the current control section generates the driving current. The suggestion/motivation would be in order to use the current to form a recording mark on the optical medium as taught by *Yoshimoto* in view of *Nakamura* in further view of *Miyazaki* (Column 22, lines 46-56).

As to **claim 6**, *Yoshimoto* and *Nakamura* are deficient in disclosing the optical disk apparatus wherein the amplitude fluctuation detection section detects the amplitude fluctuation amount of the second signal, and if the amplitude fluctuation amount exceeds the predetermined value, changes the target value in the current control section.

However, *Miyazaki* discloses the optical disk apparatus wherein the amplitude fluctuation detection section detects the amplitude fluctuation amount of the second signal, and if the amplitude fluctuation amount exceeds the predetermined value,

changes the target value in the current control section (Fig. 6, column 17, lines 18-32). In addition, the same motivation is used as the rejection for claim 5.

As to **claim 7**, *Yoshimoto* and *Nakamura* are deficient in disclosing the optical disk apparatus wherein the amplitude fluctuation detection section receives the first signal, and based on the first signal, detects an amplitude fluctuation amount of a component of the second signal that is in synchronization with the first signal.

However, *Miyazaki* discloses the optical disk apparatus wherein the amplitude fluctuation detection section receives the first signal, and based on the first signal, detects an amplitude fluctuation amount of a component of the second signal that is in synchronization with the first signal (Fig. 6, columns 17-18, lines 18-32). In addition, the same motivation is used as the rejection for claim 5.

As to **claim 14**, *Yoshimoto* and *Nakamura* are deficient in disclosing the information recording/reproduction method wherein the step of driving the light source executes a step of generating the driving current based on a frequency component of the second signal, the predetermined frequency component being approximately 1/10 or less of a frequency of the first signal.

However, *Miyazaki* discloses the information recording/reproduction method wherein the step of driving the light source executes a step of generating the driving current based on a frequency component of the second signal, the predetermined frequency component being approximately 1/10 or less of a frequency of the first signal (Fig. 11, columns 22-23, lines 46-8). In addition, the same motivation is used as the rejection for claim 5.

As to **claim 16**, *Yoshimoto* and *Nakamura* are deficient in disclosing the information recording/reproduction method wherein the step of changing the driving characteristics receives the first signal, and based on the first signal, detects an amplitude fluctuation amount of a component of the second signal that is in synchronization with the first signal.

However, *Miyazaki* discloses the information recording/reproduction method wherein the step of changing the driving characteristics receives the first signal, and based on the first signal, detects an amplitude fluctuation amount of a component of the second signal that is in synchronization with the first signal (Fig. 6, column 17, lines 33-51). In addition, the same motivation is used as the rejection for claim 5.

Response to Arguments

1. Applicant's arguments filed 916/08 have been fully considered but they are not persuasive.

Applicant argues, with respect to claims 1 and 10, on page 9, lines 1-7, that *Yoshimoto* fails to teach "an amplitude fluctuation detection section which changes the driving characteristics of the light source driving section, wherein the light source driving section is driving the output power of the light source".

Examiner disagrees as *Yoshimoto* does teach "an amplitude fluctuation detection section which changes the driving characteristics of the light source driving section, wherein the light source driving section is driving the output power of the light source" (Fig. 1, column 12, lines 54-65), where the amplitude fluctuation detection section

includes the microprocessor (62), adder (70), and differential amplifier (40), and based on the detected fluctuation amount, the driving current for actuator (48) is changed.

Conclusion

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aneeta Patankar whose telephone number is (571) 272-9773. The examiner can normally be reached on Monday-Thursday 8-5, Second Friday, 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington can be reached on (571) 272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrea L Wellington/
Supervisory Patent Examiner, Art Unit 2627

/A.P./
12/5/08